Amendments to the Specification:

Please replace paragraphs in the specification with the following amended paragraphs.

On page 23, please replace the first full paragraph with the following amended paragraph:

Fig. [[10]] 11 shows corrected waveform extracted from the respective waveform envelopes by adding and multiplying the central component, which forms a waveform distortion coefficient, with respect to the spectral waveform in Fig. 6, in order to eliminate the trend of the spectral waveform in Fig. 6. In Fig. [[10]] 11, the spectral waveform 91 corresponds to the spectral waveform 61 in Fig. 6, spectral waveform 92 corresponds to spectral waveform 62 in Fig. 6, and spectral waveform 93 correspond to spectral waveform 63 in Fig. 6. To remove the waveform trend, a method such as that disclosed in Japanese Patent Laid-open No. 2000-310512 may be used, thereby enabling the film thickness to be calculated with high precision by calculating the film thickness from corrected spectral waveforms.

On page 23, please replace the second full paragraph with the following amended paragraph:

Fig. [[11]] 10 is an explanatory diagram for measuring the spectral waveform of the wafer surface at a high S/N ratio.

On page 23, please replace the third full paragraph (which continues onto page 24) with the following amended paragraph:

In Fig. [[11,]] 10, a window glass 101 having optical characteristics similar to the refraction index of the slurry, for example, a window made of lithium fluoride (LiF_2) or magnesium fluoride (MgF_2) having a refraction index of approximately 1.4, was used for the window glass 81 in the embodiment of Fig. 2. Since the window glass 101 and the slurry 102 have roughly the same refraction index, the reflection component at the border between these respective elements is reduced, and hence the intensity of reflected light received by the beam splitter 77 increases, thereby improving the S/N ratio of the reflected light after splitting. Moreover, by supplying pure water locally to the slurry 102 in the vicinity of the window

glass 101, from a pure water tank 103 via a pipe 104, the [[lurry]] slurry 102 is diluted locally, and the slurry solution containing white suspension, such as ground material, and the like, becomes optically transparent. By detecting the reflected light from the wafer surface via this optically transparent water solution, the reflectivity of the spectral waveform shown in Fig. 6 is increased, and furthermore, waveform distortion due to scattering by ground particles in the slurry, and the like, is reduced, resulting in a spectral waveform more proximate to a sinusoidal wave, and hence improving the accuracy of film thickness calculation. The liquid supplied is not limited to being water, provided that it is a liquid which makes the slurry become optically transparent.